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Explaining Variation in the Effectiveness of Transnational Energy Partnerships

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This article analyzes the effectiveness of transnational multi-stakeholder partnerships for sustainable development—also known as "Type II outcomes" of the 2002 World Summit on Sustainable Development—in the sustainable energy sector. We combine quantitative and qualitative research. Quantitatively, we use a database of 340 partnerships, including 46 partnerships that focus on energy. Our qualitative analysis includes case studies of five partnerships that appear as the most effective and five that are operational but only with modest degrees of effectiveness. We study two competing hypotheses. The first, rooted in institutionalism, assumes that variation in effectiveness is related to organizational structures and procedures. The competing hypothesis emphasizes the power of actors and expects partnerships that involve key business actors and powerful Northern states to perform better. We conclude that the level of institutionalization is most important in explaining effectiveness, while powerful partners and the type of internal organization may further enhance effectiveness.

Introduction

Transnational multi-stakeholder partnerships are often regarded as an important institutional innovation to solve pressing problems of global governance. These supposedly novel arrangements are characterized by the involvement of both public (governmental) and private (business, nongovernmental, and academic) parties, bringing in additional resources and working toward a specific, initially defined goal. For example, Börzel and Risse (2005) argue that such partnerships may help overcome regulatory implementation and participation deficits in global governance. This argument for a new role for transnational multi-stakeholder partnerships has been made most forcefully in the policy area of sustainable development. At the 2002 World Summit for Sustainable Development in Johannesburg, such partnerships were, in fact, the only tangible outcome of the summit, often hailed as a new, "Type II" mode of global governance. Streck (2002), for instance, suggests that the agenda and procedures of the

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United Nations Organization are too stagnant to cope with current global problems. As a result of this vision of "new and innovative governance," more than 340 transnational multi-stakeholder partnerships have been agreed around or after the Johannesburg summit and registered with the United Nations Commission on Sustainable Development (CSD). Our analysis focuses on this particular set of partnerships precisely because of the high expectations and grand promises that have been voiced with their launch. Methodologically, a focus on a defined and limited set of transnational public–private partnerships (as opposed to a larger but potentially open-ended set) allows for specific, but more robust, conclusions (see Biermann, Pattberg, et al. 2007).

Yet, the positive expectations voiced in Johannesburg are also contested, and many authors caution for an overly optimistic view of multi-stakeholder partnerships in the field of sustainable development (Martens 2007; United Nations 2005). Whereas some observers see partnerships as an important step in the development of global governance, others view them rather as a "cover-up" for interstate power struggles and as indication of a privatization of international relations (Spaeth 2002). While previous assessments have highlighted that CSD-registered partnerships vary not only in function, size, goals, and organizational structure (Andonova and Levy 2003; Biermann, Chan, et al. 2007; Hale and Mauzerall 2004), relatively little is known about why multi-stakeholder partnerships vary in their effectiveness. Many partnerships seem to be ineffective and at times, not even traceable in empirical research, while others are well known and achieve the organizational goals that they have set for themselves. The key question is, then, what explains differences in effectiveness between the most effective and the least effective partnerships?

This article scrutinizes this question with regard to a subset of partnerships: transnational multi-stakeholder partnerships that focus on energy. Out of the total set of around 340 CSD-registered partnerships, 46 are dedicated to sustainable energy, which is primarily understood as the provision of energy from renewable sources or the popularization of means to economize the use of renewable energy. Most partnerships in this area seek to contribute to sustainable development through knowledge dissemination and technology transfer (33%), building of institutional capacity and training (22%), technical implementation (17%), knowledge production and innovation (13%), and some other planned functions (15%). Only 8 of the 46 energy partnerships have been established to create new energy infrastructure on the ground, while the majority is engaged in disseminating information related to sustainable energy.

This article both assesses the effectiveness of partnerships and possible factors that may explain variation in the effectiveness. We assume that variation can be explained either by the internal structure of partnerships, especially the decision-making mechanisms and management structures or by the character of actors involved. Our empirical restriction to the field

of energy policy controls for a number of variables that may explain differences between policy fields and consequently allows us to focus on the two sets of factors that we are studying.

Our article combines qualitative and quantitative methods of analysis, thus attempting to move beyond the "case study fallacy" that characterizes a large amount of recent research on partnerships. The results of both types of analysis suggest that a high level of institutionalization is necessary for a partnership to function, while a specific tripartite organizational structure and the involvement of powerful actors can additionally improve the effectiveness and scale of an initiative. Research shows, however, that even these modest institutional features are often absent for many of the CSD-registered multi-stakeholder energy partnerships. Our article thus not only contributes to a better understanding of energy partnerships but also to a broader assessment of novel governance arrangements beyond the state (for an overview, see Biermann and Pattberg 2008).

In the next section, we introduce the two competing hypotheses that may explain variation in effectiveness of partnerships along with a brief review of the broader academic literature in which these hypotheses are rooted. We then discuss the methodology used in the qualitative and quantitative analysis. Subsequently, we proceed with our empirical analysis: We first test assumptions derived from the competing hypotheses against statistical data and then provide an in-depth analysis of 10 selected partnerships. The final section summarizes our findings and suggests some avenues for future research.

Research Design and Hypotheses

Within the burgeoning field of study related to multi-stakeholder partnerships, there are essentially two core hypotheses that are brought forward to explain variation in the effectiveness of such initiatives. A first hypothesis, derived from international political economy and realist theories in international relations, points to the power of the actors involved as the main explanatory variable. It posits that partnerships that involve powerful business actors and major industrialized countries perform best. The reasoning behind this hypothesis is that considerable resources are needed to influence the activities of the energy sector worldwide. On this theoretical basis, one can hypothesize that the most powerful and influential states will try to dominate specific partnerships to limit access of other actors. Partnerships can consequently be expected to appear in areas that are strongly linked to private business. Hypotheses centering on power can also be linked to neo-Gramscian theory (Brand 2002). On this account, we expect powerful industrialized countries and major corporations to dominate effective partnerships, thus exercising hegemony under the cover of development aid and environmental initiatives (Arts 2003; Dimitrov 2003; Fuchs 2004; Goverde et al. 2000; Reinalda and Verbeek 2001).

A competing hypothesis, derived from institutionalist research traditions, posits that internal structures of partnerships influence their effectiveness: In other words, partnership design matters. Variation in effectiveness would then be related to the legal and institutional design as well as the internal organizational structure of a partnership. This argument is related to a large body of literature on intergovernmental regimes and the legalization of world politics (see, e.g., Abbott et al. 2000; Barrett 1999; Koremenos, Lipson, and Snidal 2001; Mitchell 1994). Consequently, not the characteristics of the participants but the institutional arrangements in place influence effectiveness. For example, we assume that within an institutionalized and structured context of the partnership, a more process-oriented, deliberative decision-making procedure, combined with network-style governance, enhances effectiveness.

The testing of the relative value of these competing hypotheses requires a concept to measure relative effectiveness of partnerships. Assessing the effectiveness of partnerships is contested because the concept is often underdefined, weakly operationalized, and hard to measure (cf. Bernauer 1995). In the area of environmental governance in general, the impact of institutional arrangements on environment quality indicators has to be distinguished against the background noise of a large variety of other factors. Young (2001, 100) emphasizes the need for large *n* studies and medium *n* comparative approaches (e.g., qualitative comparative analysis). Yet, while research on international regimes has made significant progress in its scope, moving from single cases to large *n* analysis of databases (especially see Breitmeier, Young, and Zürn 2006), the more recent literature on transnational policy networks and partnerships is still dominated by small *n* approaches (Vollmer 2009). Often, such studies bring interesting insights, but even though they provide measurements of effectiveness, they often fail to identify reasons for variation in influence (Mitchell 1994). Our work combines large *n* research approaches—drawing on the Global Sustainability Partnerships Database (GSPD)[1] (Biermann, Chan, et al. 2007)—with an in-depth analysis of 10 carefully selected cases.

The effectiveness of transnational multi-stakeholder partnerships could be measured at three levels: output, outcome, and impact (based on Easton 1965). Impact would measure the actual improvement in the problem area in the form of tangible changes in economic, social, or environmental parameters. However, given that transnational multi-stakeholder partnerships are a rather recent phenomenon, we expected little observable effects in terms of outcome—that is, changes in behavior of targeted communities—or even impacts—that is, positive changes of target indicators such as reductions in energy consumption. Outcome and impact are especially difficult to measure when it comes to large *n* research programs, such as our use of the GSPD, while it is more amendable to in-depth case study research. For these reasons, our focus in assessing the effectiveness of transnational multi-stakeholder partnerships is on their output, that is, their actual activities such as issuing regulations, producing

reports, conducting research, or organizing meetings. These core functions are similar for a large number of partnerships. Many partnerships provide some funding to target groups; they provide training, information, or technologies to address core areas of sustainable development. Most of these functions have been operationalized and empirically assessed in the GSPD to measure effectiveness in terms of output. The amount of output is not only comparable among partnerships but can also be measured in terms of variables such as the amount of information published in a given period or dissemination in terms of how much information has been downloaded from the partnership Web site.

Output as a standard of measurement can also overcome a specific problem of researching partnerships for sustainable development in the United Nations context: A large number of them are likely to be nonoperational—they stopped functioning, they never really started, or for some reason they are inherently dysfunctional.

While output alone suffices for a first analysis, an in-depth study needs to take into account in how far this output is related to specific functions. Only if a partnership is active in a way necessary to fulfill its function can it be ultimately effective. Within the GSPD, there are 12 types of output for each partnership. These types are linked to specific functions. In order to be able to (potentially) fulfill a function and thus (potentially) have some effects on a given sector, the output of a partnership has to be in line with its functions (the function of a partnership as used here is an abstraction of the partnership goals as interpreted by the researchers of the GSPD; the coding of functions for all the CSD-registered partnerships was based on information provided to the CSD).

A partnership is seen as partly fulfilling a function if it has at least one type of visible output related to it. Working toward fulfilling a function is, however, not equivalent to making concrete progress against targets and reaching the partnership goals initially set out. Within the context of this research, we define the effectiveness of partnerships as the sum of all its effects measured by observable output (see Biermann, Chan, et al. 2007). Strictly speaking, our research assumes that observable output will eventually influence behavior (outcome) and change target indicators (impact); in this sense, we are measuring the potential effectiveness of partnerships rather than their real impact on sustainable development.

In testing these two conflicting hypotheses outlined earlier, we employed two complementary methodologies. First, we studied all 46 energy partnerships registered with the CSD by analyzing the GSPD. The database is continuously updated, and it contains information on approximately 340 partnerships. It accounts for a number of possible explanatory factors such as actors (number, involvement of powerful states, etc.), design (inclusiveness of membership rules, flexibility, governance mechanisms, task division, institutional features, etc.), leadership (type and organizational leadership capacity), and problem type. We used descrip-

tive statistics to show how certain variables and their combinations correlate with the effectiveness (measured in terms of observable output) of energy partnerships.

Second, we conducted qualitative case studies of a sample of 10 partnerships in the energy sector, selecting the five most effective and the five least effective from those partnerships that are operational. The studies focus on different aspects of the partnership's internal organization and assess their impact on the effectiveness. Our research approach is comparable to that of "nested analysis" proposed by Evan Lieberman (2005). On the background of a large *n* statistical study, we chose a sample of cases (divided according to the variation of the dependent variable they represented) and investigated them more closely. The sample selected for qualitative investigation thus covers 20% of the whole energy partnerships population.

The group of five most effective partnerships has been selected based on two variables used in the GSPD: aggregated output and an expert survey that ranks partnerships in a number of functional areas, giving a reliable general description of the partnership's potential influence. The expert survey was conducted within the framework of the GSPD and measured, among others, how often and which partnerships were mentioned by experts as being relevant in their field. This serves as a proxy for the visibility and acknowledged activeness of a partnership in its area. The five most effective partnerships according to these criteria are the Global Gas Flaring Reduction Partnership, the Methane to Markets partnership, the Renewable Energy and Energy Efficiency Partnership, the Renewable Energy Policy Network for the 21st Century, and the International Solar Energy Society. Considerable differences between these partnerships are observable. The Renewable Energy and Energy Efficiency Partnership is by far the largest with more than 250 organizational partners involved, while the Global Gas Flaring Reduction Partnership has only 12 partners. Other important differences, allowing for the observance of variation in the explanatory variables are also present and will be discussed later.

The group of five least effective (but operational) partnerships in the energy sectors includes the African Energy Legacy Projects, the LPG Challenge partnership, the Pacific Islands Energy for Sustainable Development partnership, the U.S. Clean Energy Initiative, and the International Renewable Energy Alliance. Among these, two were completely unknown to the experts surveyed, while the U.S. Clean Energy Initiative was mentioned 10 times.

Quantitative Analysis of Transnational Energy Partnerships

Nonoperational Partnerships

To start with, our analysis of the GSPD revealed that 21 of the 46 energy partnerships are entirely inactive; that is, they do not generate any observ-

able output. Five of these 21 partnerships were indeed launched but stopped working after an agreed period. The remaining 16 nonoperational partnerships have either not started yet or were never operational. Among all the CSD partnerships, 37% do not generate any output, which suggests that energy-related initiatives are more likely to be nonoperational. This is an interesting observation given that the provision of renewable energy is a very important policy goal that attracts much political attention. In the remainder of this section, we try to answer why this dysfunctionality occurs not only through looking at zero output initiatives but more importantly, by showing the common characteristics of most successful initiatives. What is the most important factor affecting variation in measurable output? Is it the presence of important governmental and business actors or rather partnership design and internal governance patterns?

Influence of Inclusion of Important Actors

According to the "powerful actors" hypothesis, the effectiveness of partnerships is related to the power and resources of important partners who have an interest in the initiative's activities. This should mean that effective partnerships (those with high output levels) are led by powerful states or business actors, while ineffective initiatives should have many small developing states or nongovernmental organizations (NGOs) as partners.

Our data show that states are indeed reluctant to give away control over energy initiatives to private actors—two-thirds (30) of the partnerships in this sector are led by states (16), intergovernmental organizations (8), or United Nations agencies (6). However, having public actors as main partners does not seem to necessarily improve the effectiveness of partnerships as about the same percentage of public-led partnerships are found to be nonoperational as compared with those partnerships that are not led by states or intergovernmental bodies (47%). Just under two-thirds of all CSD partnerships are public led, and 44% of these have no signs of output. Thus, energy partnerships are hardly different from the average. Only 16 energy partnerships are led by private organizations, in four cases, business and in two cases, NGOs. This suggests that there is very little correlation between the type of lead actor in a partnership and its effectiveness measured in output.

Only 7 of the 16 state-led initiatives have output, suggesting that states (no matter if they are powerful or not) are even less effective leaders than international organizations. However, if we only look at the partnerships with a high participation of member states of the Organisation for Economic Co-operation and Development (OECD) (more than four OECD states as partners), we receive a set of seven partnerships. Six of these have visible output, and three belong to the five most effective partnerships (Methane to Markets, Renewable Energy and Energy Efficiency Partnership, and Renewable Energy Policy Network for the 21st Century). From the state-led partnerships that have at least one European Union (EU)

member as partner, all are fully operational. Only 15 of the total 330 CSD partnerships meet the same criteria, and all show output. This finding is very interesting and seems to be consistent with the "powerful actor" hypothesis. The role of EU states may thus be an important factor. On the other hand, partnerships with high OECD representation but no EU involvement are largely ineffective. This could suggest that decision-making culture and the specific deliberative decision-making style represented by the continental EU states have an influence on the overall effectiveness of transnational multi-stakeholder partnerships.

A combination of powerful state and business partners is also very common. One example is the Renewable Energy and Energy Efficiency Partnership, which is one of the largest energy partnerships and one of the largest CSD-registered partnerships. Some 72% of the energy partnerships with both OECD and private for-profit actors as partners generate output. More than half of these (among them, four of the five best performing) show at least six different types of activity, which according to our conceptualization equals a very high potential effectiveness. This correlation is even stronger for the overall sample of all CSD-registered partnerships, where over 80% of partnerships with both OECD states and businesses have some observable output (82% if an OECD state is also leading the partnership).

These data indicate merely a positive correlation but not necessarily a causal relation. However, if additionally, the partnerships' internal structure is taken into account—that is, if we only look at the initiatives with network-type steering (nonhierarchical)—we find that 91% of partnerships meeting all these criteria are active. OECD and business involvement plus network-type steering is perhaps a formula for success, but not an explanation. Again, the conclusion can be that based on statistical analysis, it is not possible to explain fully the difference in influence, although the correlation observed is quite strong. However, the suggested "formula" mixes variables from two realms—the one external to the partnership itself, composed of actors, and the internal structure.

Influence of Number of Actors

Following the hypothesis that the characteristics of the members of partnership matter, one could suggest that larger partnerships are more powerful and should thus perform better. The energy partnerships with visible output are highly diversified. Their size, measured by number of partners, varies from 2 (Industrial Energy Efficiency Association) to over 250 (Renewable Energy and Energy Efficiency Partnership), giving an average of 46 partners. This makes them, on average, much bigger initiatives than the group of nonoperational partnerships, which have, on average, less than 10 partners. This can suggest that active energy partnerships are more effective because they are, on average, quite large. It is also likely that they are larger because they attract more partners, and they attract more part-

ners because they have visible output. They may also gain new partners who bring in new resources and in turn, enhance output even further. The primary reason for output is not the number of partners as every partnership at some point had to start with only a handful of stakeholders. Effective energy partnerships rather appear to simply gather more partners (which can be interpreted as getting more attention) than effective partnerships on average, supporting the claim that sustainable energy is now an issue high on the political agenda. Only an analysis of concrete cases in time showing the growth of specific partnerships could help in directing the causal arrow one way or the other. That sort of analysis is beyond the scope of large *n* methods alone but will be done in this article at a later stage.

Influence of Internal Organization

Organizational structures can explain the effectiveness of partnerships both at the most superficial and at deeper levels. In particular, partnerships that are institutionalized in the form of a formal organization with its own staff generate much more output than other partnerships. This does not come as a surprise because it only means that people who are paid to work for a given initiative are doing their job. However, the finding gains practical significance if one considers that only 10 of the 46 energy partnerships have at least one staff member.

Another relevant factor is also typical for organizations in the strict sense—corporate identity, usually associated on the very minimal level with having a "brand" name, an emblem and concentrating efforts under corporate "colors." Only 11 energy partnerships have a corporate identity thus defined, and 10 of them are effective.

Qualitative Analysis of Transnational Energy Partnerships

While quantitative data can provide an overview of the CSD-registered partnerships in the energy sector and show general tendencies, there is a need to look into the actual structures of partnerships in order to explain variation in their effectiveness. Therefore, we have complemented our analysis of the GSPD by 10 in-depth case studies of transnational multistakeholder partnerships in the energy sector. The selection of the 10 cases has been described earlier; we have studied the five most effective and the five least effective energy partnerships that are operational. Five factors appeared as relevant in our analysis: the level of institutionalization, the type of function that partnerships are supposed to fulfill, the possibility of a misfit of functions and output, the influence of internal organization, and the specific institutional context and "nesting." We will discuss each of these explanatory factors in turn.

Influence of Level of Institutionalization

First, it appears from our analysis that the level of institutionalization makes a difference. To start with, the level of institutionalization[2] of the five least effective partnerships is very low. For example, the African Energy Legacy Projects is a joint venture of energy producers rather than an organization (Southern African Development Community 2009; Southern African Power Pool 2009). The "initiative" is led by the South African company ESKOM (formerly the Electricity Supply Commission), but even the single company's employee directed to represent the African Energy Legacy Projects is unreachable or does not work for ESKOM anymore (CSD 2009). The LPG Challenge resembled a United Nations Development Programme (UNDP) project rather than an actual formalized partnership. Its vagueness is made evident by the fact that the initiative has two different names (also LP Gas Rural Energy Challenge) under which it can be traced, diminishing its corporate identity. The Pacific Islands Energy for Sustainable Development is a program, undertaken to implement a policy document, realized by Pacific Islands Applied Geoscience Commission (SOPAC). The SOPAC (2009) Web site does not list Pacific Islands Energy for Sustainable Development at all. Additionally, the "partnership" has recently been subsumed under the larger Renewable Energy and Energy Efficiency Partnership.

The first major problem of ineffective partnerships is the lack of institutionalization in form of an independent organization. This results in the unclear structure of most such partnerships. This does not mean that they are grassroots arrangements. Usually, they are just proposed initiatives that have never been fully made operational. Most of them are inactive, but those that claim to be are also doing very little, perhaps because there is no one to work in the name of a given partnership. Neither the actors' power nor the style of decision making can have any impact in that case. However, the involvement of OECD and business actors can make a difference by introducing good practices to the workings of such partnerships. One example is the Pacific Islands Energy for Sustainable Development newsletter that has been issued after the signing of a memorandum of understanding with the Renewable Energy and Energy Efficiency Partnership (Pacific Islands Energy for Sustainable Development Partnership 2007). Minimal institutionalization, self-reports, and a Web site—all these can be achieved with small cost and effort.

Once a formal structure is established and a partnership becomes operational, the style of decision making can also play a role. In that sense, institutionalization is the basic factor leading to a partnership's effectiveness. All five highly effective partnerships are highly institutionalized, usually in a typical form of international organizations with steering committees and secretariats (Dingwerth and Pattberg 2009).

Ineffective partnerships often also seem to be not institutionalized on purpose as they often play a role of brands rather than actual organiza-

tions. Two partnerships from the group of the least effective energy partnerships—the U.S. Clean Energy Initiative and the International Renewable Energy Alliance—are examples of such "brands" or "labels." Their role is to be an umbrella for other existing partnerships, organizations, and programs, but they themselves have neither staff nor actual resources to perform any functions. The U.S. Clean Energy Initiative is only a name given to a wide range of American-led programs and organizations. Although it brings together very powerful actors (U.S. Department of State, U.S. Environmental Protection Agency, U.S. Agency for International Development, World Health Organization, Nations Department of Economic and Social Affairs, the World Bank, UNDP), it has little actual action capacities. Probably because it is only a "brand" sticker for numerous other initiatives, it has a very high expert "mentioning" score in our expert survey.

The International Renewable Energy Alliance is a coalition of four actual renewable energy organizations: the International Geothermal Association, the International Hydropower Association, the International Solar Energy Society, and the World Wind Energy Association (International Renewable Energy Alliance 2009). They are all active and visible in the energy sector, some for more than half a century (as for the International Solar Energy Society), but the advocacy projects bearing the International Renewable Energy Alliance brand are performed by individual member organizations (International Solar Energy Society 2009). It is the only one of the least effective operational partnerships with a Web site and a logo. Nevertheless, it has no visible output of its own (GSPD 2008). The question then is why such initiatives are established in the first place? Why create a partnership that is meant to do nothing concrete and has no chance of success? To answer these questions, we must first problematize the concept of "success." As Marianne Beisheim and Klaus Dingwerth (2008, 6) point out, we first need to ask: *Success for whom*? Success from the perspective of founders or members at large is not necessary the same as "objective" success from the perspective of the entire society or the environment. Therefore, what may seem as unacceptable waste of resources and attention—multiplying the number of dysfunctional sustainability initiatives—can well be explained by publicity and "synergy" profits for the partners. It is definitely better to have a broad portfolio of partnerships in various sectors than none or just a few, even if they are active. This explains, to some extent, the alarming ratio of inactive and ineffective partnerships in the CSD register.

Influence of Type of Function Partnerships Are Supposed to Fulfill

The group of highly effective and little effective partnerships varies significantly in terms of the functions they are meant to perform (as coded in the GSPD, see Table 1).

TABLE 1
Variables and Operationalization

Variable	Operationalization
Involvement of "powerful actors"	Three variables from the GSPD database have been considered separately as well as together: involvement of OECD states, EU states, and private business
Level of institutionalization	Several elements are taken into account, such as own staff, office, signs of corporate identity such as logo
Steering	Three types of steering are distinguished: hierarchical steering, partial steering, and network-type steering

GSPD, Global Sustainability Partnerships Database; OECD, Organisation for Economic Co-operation and Development; EU, European Union.

TABLE 2
Functions of Highly Effective and Little Effective Partnerships Compared

	Number of Partnerships Performing the Function	
Function	Five Most Effective Energy Partnerships	Five Least Effective among the Operational Energy Partnerships
Knowledge dissemination	3	—
Technology transfer	3	4
Technical implementation	3	2
Participatory management	—	3
Training	2	1
Planning	1	1
Norm setting	1	—
Lobbying	1	—
Capacity building	—	1

The most visible difference is the emphasis on participatory management, technology transfer, and technical implementation among the less effective partnerships in contrast with knowledge dissemination as one of the key functions for highly effective ones. Insofar as the "laggards" do not have any visible signs of output at all, it is not possible to see any function–output fit. What is to be noted, however, is that participatory management and technical implementations are difficult to achieve. None of the five most effective energy partnerships manages to have any influence in this area either. In other words, the third reason explaining ineffective partnerships' failure is the choice of functions and goals that are very difficult to reach. This is not wrong in itself but may account for less effectiveness. As Table 2 shows energy partnerships rarely take up the more difficult functions. Do the most effective partnerships perform that well in contrast to the "laggards?" The analysis of the fit between function and output reveals a more complex relationship.

Fit between Function and Output

Output is not equivalent to problem-solving capacity but rather an indicator for the potential success of a partnership. In order to be considered successful in terms of making progress against certain predefined targets, a partnership is expected to be active in ways fulfilling its functions. Having many types of output is not necessarily conducive to reaching goals; it does add, however, to publicity. On the other hand, fewer types of output concentrated only on function fulfillment can be interpreted as an indicator for potential effectiveness. Output-generating partnerships vary significantly with regard to their function–output fit. Some partnerships have activities but related to a function that the partnership did not initially plan to perform, while others only produce few types of output but focused precisely on the actual function to be fulfilled.

The Mediterranean Renewable Energy Program has only three types of output, yet they act toward the fulfillment of two out of three of its functions. An even better example is the "Energy for Poverty Eradication and Sustainable Development" initiative, which has only one type of output, but it is also (ideally) helping it in reaching its goals in two out of three areas. Among the five most effective energy partnerships are only two partnerships that fulfill all of its functions—Methane to Markets and the Renewable Energy Policy Network for the 21st Century. However, the remaining three "champions" are performing relatively well and act toward two out of three functions (Table 3).

It is important to note that types of output are much diversified in the efforts and resources needed to generate them. The participation in conferences or the organization of a workshop is hardly related to infrastructure construction. Three of the five most effective energy partnerships have "technical implementation" as their function, but none of them has matching visible output. The African Energy Legacy Projects, one of the "laggards," was established to fulfill this function alone—and so far, it fails. Should the African Energy Legacy Projects finally complete the construction of at least one transmission line improving the Pan-African electric grid, it would reach a very important and measurable goal—perhaps its actual impact would be much more important than all five most effective energy partnerships combined. However, the functions chosen by the five most effective partnerships are usually much more modest. Three of them aim at knowledge dissemination, three at technology transfer, two at training, and the remaining functions are planning, lobbying, and norm setting. All of these functions relate to information and "know-how" dissemination.

Another relevant observation is the amount of excess output generated because of activities not related to initially declared functions. If we exclude the possibility that this "bonus" output is a result of theoretical and methodological shortcomings (the explained subjectivity of function–output fit analysis, meaning that the so called "excess output" could in fact

TABLE 3
Highly Effective Partnerships' Function–Output Fit and Excess Activities

Partnership	Function I and Related Activities	Function II and Related Activities	Function III and Related Activities	Excess Activities (Fraction of Total)
Global Gas Flaring Reduction Partnership	Knowledge dissemination 3/4 training, workshop, conference participation	Technical implementation 0/1 —	Technology transfer 2/4 training, workshop	Research, standards, policy, self-reports (4/7)
Methane to Markets Partnership	Planning 3/4 policy, workshop, conference participation	Technology Transfer 2/4 workshop, infrastructure and technology transfer	Training 1/2 workshop	Advocacy, self-reports, database, new institutions (4/8)
Renewable Energy and Energy Efficiency Partnership	Knowledge dissemination 3/4 database, workshop, conference participation	Technical implementation 0/1	Norm setting 1/1 standards	Advocacy, self-reports, new institutions (3/7)
Renewable Energy Policy Network for the 21st Century	Lobbying 2/2 policy, conference participation	Knowledge dissemination 2/4 workshop, conference participation	—	Research, advocacy, new institutions (3/6)
International Solar Energy Society	Training 2/2 workshop, training	Technology Transfer 2/4 training, workshop	Technical implementation 0/1	Research, advocacy, policy, conference participation (4/6)

Notes: The table presents the activities of partnerships in the Global Sustainability Partnerships Database categorized according to the three functions coded for each partnership in the database. The fourth column lists output not related to any of the three functions. For each function, the activities of a partnership are shown as a fraction of all the types of output that are aimed at fulfilling this function. The output types not related to function fulfillment are shown as a fraction of the total output types of a given partnership, thus showing what part of its output is not related to the actual goal fulfillment.

be perceived by the partnership itself as fulfilling its core functions), the remaining conclusion is that active partnerships are putting effort and resources into irrelevant activities. Irrelevant again from the perspective of the general public in the sense that the partnership is not working toward goals and impact but rather working just for the sake of it. For all five most effective partnerships, at least half of the performed activities are not meaningfully related to its functions. If we assume that such mode of operation is using many resources, which could have been channeled toward progress against important targets, it turns out that even the most effective energy partnerships are quite inefficient. This last criticism should not divert our attention away from the fact that more than 50% of all CSD partnerships are showing hardly any output related to achieving their sustainability targets. Among them, the five most effective energy partnerships analyzed here are real "champions."

Influence of Internal Organization

An inductive study of the five most effective energy partnerships shows that they have common features at the level of internal organization, which can be seen as increasing effectiveness. While the very low level of institutionalization among the least effective partnerships is the key reason for their dysfunctionality, the energy sector "champions" are highly institutionalized and have robust organizational structures (Pattberg et al. 2009). This helps them work toward the achievement of their goals despite the fact that all these initiatives are much diversified (with the exception of the Global Gas Flaring Reduction Partnership). Through our qualitative analysis, two important structural features became visible in the sample of the most effective partnerships that play a role in increasing problem-solving capacity: management structure and the presence of executive and administrative suborgans.

Management Structure. The first is management structure, resembling international organizations, in which three elements are present: a general assembly representing all the partners/members, a smaller executive board performing regular activities, and an administrative as well as representative secretariat that keeps the organization running. The second feature is the presence of subbodies organized along issue areas or geographic location, allowing for the constant reception of signals from the organization's environment.

All of the five most effective partnerships show elements of this structure.

1. The Methane to Markets partnership has a permanent steering committee, which is composed of the maximum of two delegates from each of the partner states (Methane to Markets 2009). The steering committee meets regularly, but the daily administrative activities are

implemented by the Administrative Support Group, the partnership's secretariat. Subcommittees act both as lower level executive organs and as focused governance organs. Subcommittees implement the partnership's strategies in the respective sectors (coal, oil and gas, landfill gas, and agriculture) and coordinate specific projects.

2. The Renewable Energy and Energy Efficiency Partnership maintains a clear task division between the permanent executive body and the general assembly (Pattberg et al. 2009). The head of the governing board (executive) also chairs the annual Meeting of Partners. The organizational backbone of the partnership is the International Secretariat, employing 8–10 permanent staff members. It not only deals with the administrative and coordination issues but also engages in lobbying activities and public relations (Moscoso-Osterkorn 2005). The Programme Board and Finance Committee are elements of a complex yet transparent decision-making structure, which also involves regional secretariats (with permanent Renewable Energy and Energy Efficiency Partnership staff) and focal points.

3. The Renewable Energy Policy Network for the 21st Century has a similar structure. The steering committee in this case is the larger assembly, while the day-to-day executive is the elected standing bureau (Renewable Energy Policy Network for the 21st Century 2009). Again, the administrative and representative functions are performed by the permanent secretariat, which is (as in the case of Renewable Energy and Energy Efficiency Partnership) the main carrier of the partnership's corporate identity.

4. The International Solar Energy Society, as a transnational NGO with a 54-year track record, has the most complex structure of the most effective initiatives. It is, however, possible to distinguish the same core organs as in the three initiatives already discussed. In the International Solar Energy Society, the board of directors acts as a steering committee, with the executive committee as permanent executive body. The International Headquarters in Freiburg is only an alternative name for a typical secretariat. Additional bodies such as the divisions, councils, and standing committees diversify the executive, while regional offices and national sections act as local secretariats and focal points for the organization.

5. Only the Global Gas Flaring Reduction partnership is coordinated by a temporary secretariat at the World Bank. A steering committee is currently planned (Global Gas Flaring Reduction Partnership 2009).

Overall, this supports our argument that such tripartite structure enhances the potential effectiveness of a partnership. The secretariat is a nodal point, which in a way "is" the organization; that is where the staff

dedicated to its day-to-day output is employed. This implies two things: The secretariat is the carrier of the partnership's organizational identity and therefore, is crucial for its effectiveness.

The other key point with regard to organizational structure is the steering committee or board. If we analyze the names of people sitting in the various steering committees and executive boards, we notice a certain overlap among the energy partnerships. The most striking example is Griffin Thompson from the U.S. State Department, who sits in the Steering Committee of the Renewable Energy Policy Network for the 21st Century, the Governing Board of the Renewable Energy and Energy Efficiency Partnership, and another successful partnership, the Global Village Energy Partnership. Piotr Tulej from the European Commission also serves both the Renewable Energy Policy Network for the 21st Century and the Renewable Energy and Energy Efficiency Partnership. Although board members come and go, the fact that certain names appear more than once suggests that these executive bodies are the focal points for expertise. While secretariats guarantee visibility, operational disposition, and "brand" continuity (they are also the driving force of the organization similar to any bureaucracy), executive boards are necessary for important decisions leading to goal attainment, partnership's growth, and donor credibility. In other words, partnerships that do not adopt this basic tripartite structure are far less likely to succeed in the long term.

Executive and Administrative Suborgans. The second decisive feature of successful partnerships in the energy sector is the presence of executive and administrative suborgans. Methane to Markets has a set of four sectoral subcommittees representing the methane producing industries, while the Renewable Energy and Energy Efficiency Partnership has eight Regional Secretariats (and corresponding regional steering committees) and two regional focal points (Renewable Energy and Energy Efficiency Partnership 2009). Both these (seemingly different) sets of organs play a very similar role. Methane to Markets draws its relative success from the close link with industry in specific issue areas, while the Renewable Energy and Energy Efficiency Partnership, as emphasized by one of its senior staff member, aims at a regional and local focus: "In the past a lot of these regional consultations were really one-sided. . . . Being bottom-up and driven by your partners in the regions has a significant advantage in terms of ownership by those countries."[3]

The International Solar Energy Society is situated in between these two approaches, combining a regionally and nationally focused approach with the issue-oriented perspective. Such lower-level orientation plays an important role in enhancing a partnership's influence. This does not necessarily show in the output but rather in the actual fulfillment of partnership functions.

Influence of Institutional Nesting

As a final explanatory factor that has emerged through the qualitative analysis is the way in which a partnership is nested in already established institutional structures. The Global Gas Flaring Reduction partnership stands out from the rest as its organizational structure is rooted in a different tradition. The initiative resembles more a project on an intergovernmental organization than a self-standing transnational NGO. It is essentially a program of the World Bank, headed by a program manager. At first glance, the partnership is almost a twin of the LPG Challenge—also a project of an intergovernmental organization but hosted by the UNDP. Both are also rather narrow-in-scope sectoral initiatives. Such degree of similarity allows for a fruitful comparison.

While the structure of LPG Challenge was unclear and there seems to be no person responsible for the partnership's activities (or lack thereof), the Global Gas Flaring Reduction Partnership has a permanent staff of 10 (all World Bank employees), which is a rather high number compared to the total set of all 340 CSD-registered partnerships. A steering committee is to be established until that time the World Bank takes care of the day-to-day administrative activities. While the lack of institutionalization, staff, and resources can be an explanatory variable, it also needs explanation. The LPG Challenge is a development-oriented program under the United Nations. While energy is its main theme because it deals with liquid petroleum gas, its goals are in fact related to the improvement of living standards, health, and poverty alleviation (CSD 2009).

The Global Gas Flaring Reduction Partnership unites a number of very influential and powerful partners, and its activities can have important environmental impact precisely because it is related to one of the most important industries globally—the oil industry. The comparison between these two initiatives supports the "powerful actor" hypothesis about partnership effectiveness. With private partners such as British Petroleum, ExxonMobil, TotalFinaElf, Statoil, Shell Petroleum, Norsk Hydro, and Chevron Texaco, governments of the United States, Norway, the United Kingdom, of members of the Organization of the Petroleum Exporting Countries as well as other oil exporters, and the administrative support of the World Bank, the Global Gas Flaring Reduction Partnership seems to be destined for success. Yet, its effectiveness raises many questions. Despite the potential resources available, it failed to fulfill the most difficult function—technical implementation. More than half of its output is not related to its functions. The Global Gas Flaring Reduction Partnership seems to be a perfect example of the privatization of global environmental governance (Falkner 2003; Pattberg 2005). In the lack of existing international regulation of gas flaring, private actors, and interested governments (the Norwegian government, which is the main owner of the semiprivate oil industry companies Statoil and Norsk Hydro, stands somewhere between public and private stakeholders in this case) decided on voluntary regula-

tion for themselves. This can be interpreted either as a positive action and "greening" of the oil industry or as "green window dressing," which hides cartel-like practices. In either case, the role of powerful public and private actors is considerable, while the impact of internal organization is hard to evaluate.

Conclusions

Overall, we conclude from our analysis that the involvement of powerful actors is necessary but not sufficient for an initiative's success. As the quantitative analysis has shown, the presence of industrialized countries, along with that of private for-profit partners, is quite strongly correlated with output. The more in-depth qualitative analysis suggests that the influential partnerships link many powerful states and businesses. By contrast, most of the least effective partnerships include weaker and poorer African countries (African Energy Legacy Project, LPG Challenge) or small island developing states. However, a more detailed analysis suggests that powerful actors alone are not a sufficient condition for partnership success. First of all, if a partnership serves as a "brand" rather than an actual organization, it will not be effective even if it has far reaching support from the United States (as the U.S. Clean Energy Initiative) or from influential and established international organizations (as the International Renewable Energy Alliance). In such cases, the powerful partners can influence a partnership's visibility and reputation (as for the U.S. Clean Energy Initiative), but effectiveness as a partnership is not really the direct goal of these initiatives.

Another point emerging from the qualitative analysis is that the level of institutionalization and the internal organizational structure of an initiative matter. Effective partnerships have to be institutionalized into real organizations. If they are, they become operational and can work toward achieving the envisaged goals. Depending on the scale of these goals, the activities of a partnership may require more or less resources. If the aim of a partnership is knowledge dissemination, training, or advocacy, the resources needed are quite limited. The nongovernmental International Solar Energy Society is able to function effectively for over five decades without being co-opted by business actors or powerful states. The same holds for the Renewable Energy Policy Network for the 21st Century, which is primarily a lobbying and advocacy network. However, the more salient an issue area is for governments (e.g., oil or energy security), the higher are the chances that powerful state actors will get involved. The example of the Global Gas Flaring Reduction Partnership shows that petroleum-related issues feature prominently on the agenda, attracting powerful actors to "voluntary" private regulation. The case of the Renewable Energy and Energy Efficiency Partnership suggests that while wealthy and powerful donors are important for the scale of an initiative, it may actually be the bottom-up (be it regional or issue-oriented) approach that explains the influence a partnership can have and the impact it potentially could make.

The decision-making styles and the governance culture might also play a role but only in the context of a functional partnership. If a partnership is operational and well institutionalized in the form of an organization with functional forums of decision making, then (and only then) can the factor of deliberation make a difference. Hence, the main policy conclusion of this article is that a partnership, in order to be effective, needs to be institutionalized, preferably in the form of an organization with an executive board that should include the representatives of major stakeholders and a permanent administrative secretariat dedicated to the goal and mission of the initiative. The involvement of powerful actors can help by bringing in necessary resources and is crucial in the case of large-scale partnerships established to perform difficult and costly activities.

Our analysis has also shown the adequacy of an approach that combines quantitative and qualitative methods to assess the effectiveness of multi-stakeholder partnerships. We have proposed to approach the question of effectiveness by analyzing the concrete output of partnerships, using its fit with the partnerships' function as a proxy for potential effectiveness. Future research should engage further with the challenging question of how to gather comparative data on partnership outcome (behavioral change) and partnership impact (problem solving).

Finally, we come back to the central question that underlies much of the current sustainability discourse: Are partnerships a major innovation in global governance for sustainable development or rather old wine in new bottles? First, our finding that a partnership should be institutionalized to be functional may seem trivial, but in the context of over 300 CSD partnerships, it clearly is not. As we have shown, some partnerships are purposefully left as hollow, noninstitutionalized "brands," while others simply do not have the necessary resources to support a standing administration. Hence, the findings of this article directly challenge claims that partnerships are a positive institutional innovation established to reach the goals of sustainable development. While their broad and general goals are widely accepted, it seems that many partnerships do not offer concrete steps toward achieving international commitments and remain mostly at the level of political rhetoric (cf. Biermann, Pattberg, et al. 2007).

Only a minority of partnerships is operational and has visible signs of output, which normally correlates with a certain degree of institutionalization and organizational form. The examples of relatively effective partnerships that we investigated show that this organizational form often hardly differs from the standard structure of intergovernmental organizations. Partnerships are regarded as institutional innovations only because they take the form of private–public governance schemes. However, the example of the International Solar Energy Society suggests that as far as NGOs and epistemic communities are concerned, the "private" sector has already been included in such initiatives for some time. Only direct involvement of business actors seems to be new, but then the question is if this form of "innovation" is, in all cases, necessarily positive.

One argument in support of the claim that partnerships improve global governance is that their permanent secretariats—the administrative bureaucratic cores—are usually quite efficient. They employ few professionals who are meticulously monitored by the donors. This helps to save financial resources for other activities than just running the organization. This is an often-mentioned weakness of traditional intergovernmental organizations. In this sense, the closer cooperation with business actors and the diffusion of modern corporate management patterns are indeed a positive innovation.

However, within the overall community of partnerships, where numerous actors are involved in similar activities, we can also observe substantial "turf wars." It is quite clear that numerous partnerships with a larger scope are doubling their functions and efforts to some extent. The British and Norwegian governments lead Renewable Energy and Energy Efficiency Partnership, the Italian Mediterranean Renewable Energy Program, the German Renewable Energy Policy Network for the 21st Century, the French Agence de l'Environnement et de la Maîtrise de l'Energie, and the U.S. Global Village Energy Partnership—all partnerships in the general area of "renewable energy" are a good example. Sometimes this leads to cooperation; on other occasions, potential areas of intervention are demarcated along the lines of older "aid regimes" often of colonial origin. However, resources can also be wasted this way, and this is a conclusion supporting the establishment of an overarching regulatory body in the sustainable development and environmental governance sector (Biermann 2000).

In sum, based on our assessment of sustainable energy partnerships in the sample of CSD multi-stakeholder partnerships, the positive expectations that were placed on multi-stakeholder partnerships by both governments and civil society organizations have hardly been met. If inactive partnerships were erased from the CSD database by the United Nations Department of Economic and Social Affairs, the number of partnerships would most likely be halved. However, the political myth of multi-stakeholder partnerships is still alive. Partnerships that are nonoperational remain in the CSD database and can even become partners of other partnerships (as happened with the Pacific Islands Energy for Sustainable Development partnership and Renewable Energy and Energy Efficiency Partnership). This critique may seem unfair to those partnerships that are doing their best to fulfill their goals. However, even when considering success cases such as Renewable Energy and Energy Efficiency Partnership, the promise of effective, fair, and equitable global governance through multi-stakeholder partnerships is quite exaggerated.

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Notes

1. The Global Sustainability Partnerships Database (GSPD) was developed between 2006 and 2009 at the Institute for Environmental Studies, VU University Amsterdam. Based on data provided by the CSD Partnership Database, extensive desk studies, and more than 150 expert interviews, the database provides information on descriptive categories such as number and type of lead partners, area of policy implementation, and function performed. In addition, the GSPD also contains information about individual partnership output, that is, the concrete activities and programs of multi-stakeholder partnerships. All data were coded by a team of researchers for whom an inter-rater reliability check has been performed. For more details on the data categories used, see Biermann, Chan, et al. (2007), Biermann, Pattberg, et al. (2007), Biermann et al. (Forthcoming), and Pattberg et al. (Forthcoming).
2. For the purpose of this analysis, the level of institutionalization is understood as a combination of "institutional" variables coded in the GSPD (staff, office, own budget, and logo) as well as the results of a qualitative assessment of the 10 partnerships analyzed. This included an evaluation of the relationship between the partnership and the founding partners (i.e., is the partnership institutionalized as a separate organization or is it only a project ran within the existing structures of a larger entity?), corporate identity, and the legal basis on which the partnership operates.
3. Interview with Renewable Energy and Energy Efficiency Partnership staff member, April 2008, Vienna.

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